

1 **CLAIMS**

2 1. A method comprising
3 at a web server, providing web-based map viewing,
4 publishing, and provisioning services, and
5 centrally storing map information for use in providing the
6 services.

1 2. The method of claim 1 also including
2 receiving from an application server or a mapping server
3 requests associated with the viewing, provisioning, or publishing
4 of maps, and
5 providing a bridging function that includes reformatting the
6 requests into non-proprietary standardized formats.

1 3. The method of claim 1 also including
2 storing the map information in a database,
3 abstracting the map information to generate metadata that
4 represents the information, and
5 enabling a mapping application to access the metadata.

1 4. The method of claim 1 also including



2 receiving requests that relate to viewing, publishing, or
3 provisioning web-based maps, and

4 serving the requests at least in part by accessing remote
5 application service provider functions.

1 5. The method of claim 4 in which the functions include
2 locating addresses or finding shortest paths.

1 6. The method of claim 1 also including

2 enabling a user to upload map data from a client through
3 the Internet to the server for use in executing the publishing and
4 provisioning services.

1 7. The method of claim 6 in which the uploaded map data is
2 automatically integrated with the stored map information for
3 access by remote viewers.

1 8. The method of claim 1 also including

2 enabling a user at a web-client to define and build maps
3 and spatial graphics by interaction with the server.

1 9. The method of claim 1 also including

2 enabling users to categorize how web-based maps and map
3 layers will appear based on style definitions.

1 10. The method of claim 1 also including

2 enforcing levels of security to control access by users to the
3 viewing, publishing, and provisioning services.

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- 1 11. The method of claim 1 also including
2 managing access by users to the viewing, publishing, and
3 provisioning services by grouping the users according to their
4 rights to use the respective services.
- 1 12. The method of claim 6 also including
2 guiding the user interactively to define the data sets, select
3 the data files to upload, and initiate the upload.
- 1 13. The method of claim 1 also including
2 enabling a user at a client to preview a map over-the-web
3 prior to provisioning the map.
- 1 14. The method of claim 1 also including
2 enabling a user at a client to publish a map by a single
3 mouse click to initiate publishing at the server.
- 1 15. The method of claim 1 also including
2 enabling a user at a client to define an initial map extent
3 using a web-based interface.
- 1 16. The method of claim 1 also including
2 enabling a user at a client to define visual attributes of a
3 layer.
- 1 17. The method of claim 16 also including
2 providing the user a palette of selections for a layer element
3 property.



- 1 18. The method of claim 1 also including
2 enabling a user at a client to define theming of map and
3 spatial information using a web-based interface.
- 1 19. The method of claim 1 also including
2 enabling a user at a client to incorporate image data into
3 maps using a web-based interface.
- 1 20. The method of claim 1 also including
2 enabling a user to print electronic maps using a web-based
3 interface.
- 1 21. The method of claim 1 also including
2 enabling a user at a client to define and include map
3 accessory information.
- 1 22. The method of claim 1 also including
2 enabling a user at a client to control the layout of a map and
3 accessory information using an interface layout panel that enables
4 dragging and positioning of components.
- 1